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**STATE BUDGET OFFICE  
FISCAL YEAR 2018 EXECUTIVE RECOMMENDATION  
FEBRUARY 8, 2017**

**State of Michigan Defined Benefit Retirement and Retiree Healthcare Plans  
Assumed Rate of Return on Investments**

**Overview:**

The Michigan Office of Retirement Systems (ORS) administers defined benefit (DB) retirement programs and related retiree healthcare plans for Michigan's state employees, public school employees (MPERS), judges, State Police enlisted officers, and National Guard members.

Defined benefit retirement systems are built on employers and employees making contributions to the system as employees accrue years of service. Those contributions are then invested on a long-term basis. The combination of the original contributions and investment earnings are then utilized to make benefit payments when an employee retires.

A number of actuarial assumptions are utilized to determine annual required contribution amounts, including an assumption regarding the long-term rate of investment return. The current long-term assumed rate of investment return for the state's retirement systems is 8%, except that the assumption is set at 7% for the recently created public school and state police hybrid plans, which cover new employees in those categories.

Based on the advice of the state's Bureau of Investments and the retirement systems' actuary, the governor is recommending that the assumed rate of return on investments (AROR) be reduced from 8.0% to 7.5% for the state's DB pension and retiree health care plans. This change will be adopted by the retirement systems' boards and the director of the Department of Technology, Management and Budget.

This change in the investment return assumption is more in line with the industry standards based on expectations of the long-term markets. Assumed rates of return that are set too high understate retirement liabilities and undercharge for current payments at the expense of future payments. If no action is taken within the next two years, it is likely the actuary will issue a qualified valuation, which may also impact the state's credit ratings.

System	Return Assumption
Indiana Teachers	6.75%
Illinois Teachers	7.00%
Wisconsin State	7.20%
Pennsylvania Teachers	7.25%
Ohio Teachers	7.75%
Minnesota Teachers	8.40%
<b>*Average</b>	<b>7.39%</b>
<b>**Median</b>	<b>7.23%</b>

**Benefits of lowering the assumed rate of return:**

- Reduces the risk of future Unfunded Actuarial Accrued Liability (UAL) growth.
- Increases sustainability of the funds.
- Increases stability of contribution rates.
- Moves the legacy DB plans and retiree healthcare plans toward the best practice utilized by the public school and State Police hybrid plans.
- Improves the state's ability to make benefit payments and meet our promises.

**Budgetary impacts of lowering the assumed rate of return:**

- Because investment income plays a large role in determining the required contributions for the retirement systems, a reduction in the assumed rate of return requires a corresponding increase in employer contributions. Additional contributions now, however, will reduce the risk of even larger contribution increases in later years.

- The increased contributions are needed to pay toward both the unfunded accrued actuarial liability (UAL) legacy costs and the normal costs, which are the annual payments into the retirement system for the calculated costs of future benefits of current employees when they retire based on accruing additional service time each year.
- It is important to note that in general there is a three-year lag between the date of an actuarial valuation and the budget year that it affects. For example, fiscal year 2015 valuations for pension and retiree health (OPEB) were used in developing the fiscal year 2018 budget. Since the 2015 valuation is complete, a budgetary adjustment was made to account for the increased level of required contributions that would have been calculated assuming a lower rate of return. The lower assumed rate of return will be used by the actuary to complete the 2016 valuation later this year, directly impacting fiscal year 2019 budgetary requirements.

#### **Executive Budget Proposal:**

The fiscal year 2018 budget includes \$153 million in the Education Omnibus and \$93.9 million (\$50.8 million general fund) in the General Omnibus, for a total of \$246.9 million, to recognize the costs of lowering the assumed rate of return. The budget effectively assumes that the rate is reduced over 2 years for MPSERS and immediately in fiscal year 2018 for all other systems

For the Michigan Public School Employees' Retirement System (MPSERS), the fiscal year 2018 budget includes \$100 million for increased UAL costs, which must be paid by the state, as a statutory cap limits districts' and other employers' UAL obligations to 20.96% of payroll (25.73% for universities). The governor's budget also includes an additional \$53 million to pay for the anticipated increase in normal cost contributions, which would otherwise be paid by employers. Thus, districts, colleges, libraries, and universities are held harmless from this change.

For state employees, the costs resulting from the lowered assumed rate of return have been built into defined calculations applied to all appropriation line items containing employee compensation costs.

Even with this significant investment, the net year-over-year cost increase in state-level costs for all retirement systems is under \$10 million. This is due to baseline savings resulting from better-than-anticipated health care experience, positive investment return experience in recent years, and the completion of paying off the costs of the most recent state employee early retirement incentive over a 5-year period.

#### **Additional Contributions at 7.5% (In thousands)**

System	FY 2018	FY 2019
Public Schools (MPSERS)	\$153,000.0	\$306,000.0
State Employees (SERS)	\$83,650.8	\$83,650.8
State Police	\$8,987.4	\$8,987.4
Judges	\$1,033.9	\$1,033.9
Military	\$224.6	\$224.6
<b>Total Additional Costs</b>	<b>\$246,896.7</b>	<b>\$399,896.7</b>

Baseline Savings	
MPSERS	(\$126,300.0)
SERS	(\$111,000.0)
<b>Total Savings</b>	<b>(\$237,300.0)</b>

<b>Net FY18 Increased Cost</b>	<b>\$9,596.7</b>
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# Pension Funds Pile on Risk Just to Get a Reasonable Return

**An investor used to get a 7.5% return by holding safe bonds. To earn that now, research finds, takes a more volatile mix**

By

Timothy W. Martin

May 31, 2016 12:43 p.m. ET

What it means to be a successful investor in 2016 can be summed up in four words: bigger gambles, lower returns.

Thanks to rock-bottom interest rates in the U.S., negative rates in other parts of the world, and lackluster growth, investors are becoming increasingly creative—and embracing increasing risk—to bolster their performances.

To even come close these days to what is considered a reasonably strong return of 7.5%, pension funds and other large endowments are reaching ever further into riskier investments: adding big dollops of global stocks, real estate and private-equity investments to the once-standard investment of high-grade bonds. Two decades ago, it was possible to make that kind of return just by buying and holding investment-grade bonds, according to new research.

In 1995, a portfolio made up wholly of bonds would return 7.5% a year with a likelihood that returns could vary by about 6%, according to research by Callan Associates Inc., which advises large investors. To make a 7.5% return in 2015, Callan found, investors needed to spread money across risky assets, shrinking bonds to just 12% of the portfolio. Private equity and stocks needed to take up some three-quarters of the entire investment pool. But with the added risk, returns could vary by more than 17%.

Nominal returns were used for the projections, but substituting in assumptions about real returns, adjusted for inflation, would have produced similar findings, said Jay Kloepfer, Callan's head of capital markets research.

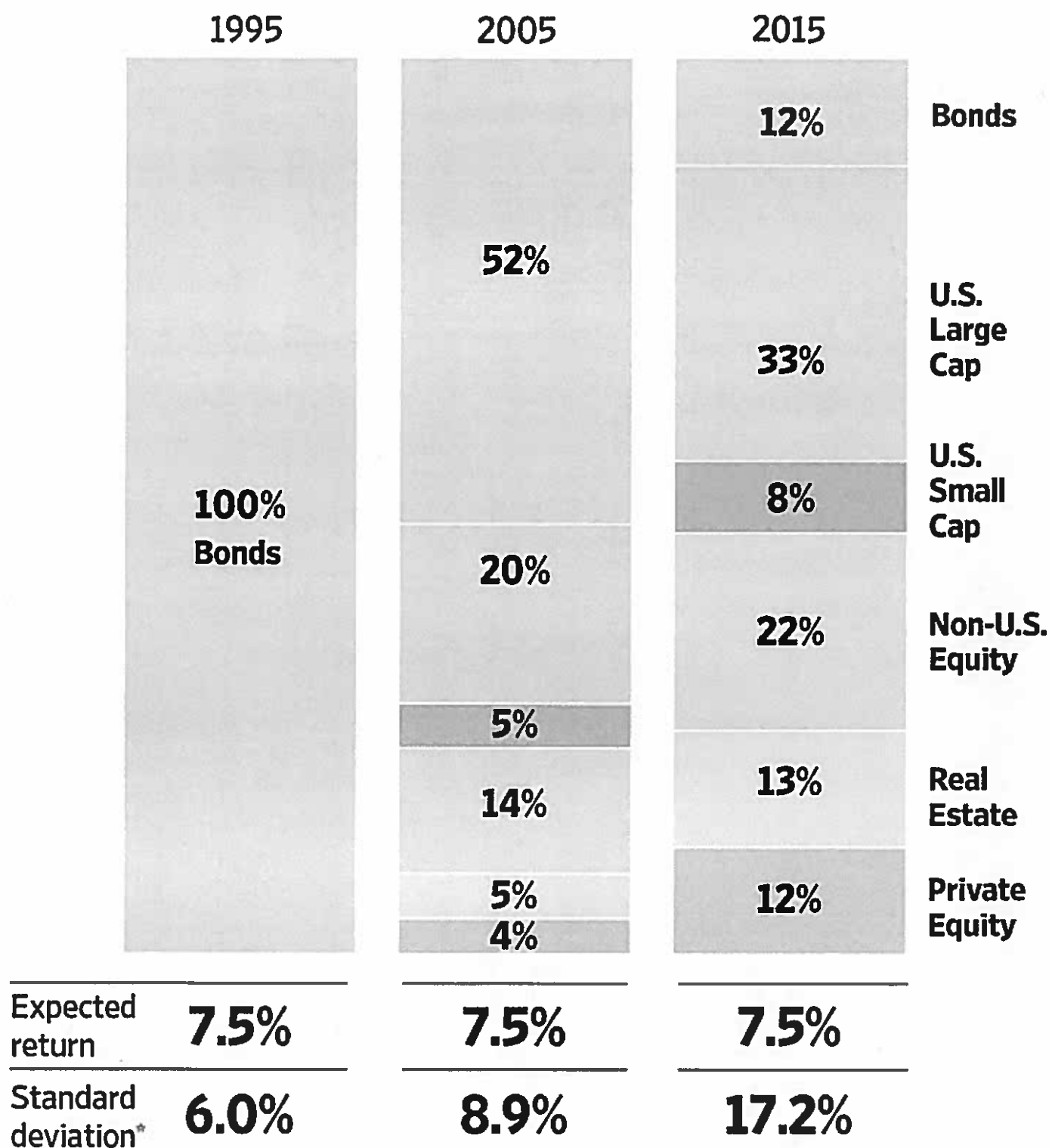
The amplified bets carry potential pitfalls and heftier management fees. Global stocks and private equity represent among the riskiest bets investors can make today, Mr. Kloepfer said.

"Stocks are just ownership, and they can go to zero. Private equity can also go to zero," said Mr. Kloepfer, noting bonds will almost always pay back what was borrowed, plus a coupon. "The perverse result is you need more of that to get the extra oomph."

# Rolling the Dice

Investors grappling with lower interest rates have to take bigger risks if they want to equal returns of two decades ago.

## Estimates of what investors needed to earn 7.5%



Bonds historically produced a source of safe, good-enough streams of profit that allowed long-term, risk-averse investors to hit annual targets. The era of low rates has all but erased that buffer. The absence of a few extra percentage points of yield means investors must now compensate by embracing unsafe bets that could strike big—or flop. The Callan report highlights how risky an endeavor that is.

“Not nearly enough attention has been paid to the toll these low rates—and now negative rates—are taking on the ability of investors to save and plan for the future,” BlackRock Inc. Chief Executive Officer Laurence Fink said in a recent letter to shareholders.

Some investors such as David Villa of the \$100 billion State of Wisconsin Investment Board argue that at near zero, rates are artificially suppressed, and it’s creating bubbles in asset prices.

“We know the Federal Reserve is trying to trick us—we’re dealing with distortions,” said Mr. Villa, referring to how low rates have historically encouraged investors to take on more risk. “They want us to invest in building new things, but what [investors are] doing is trading existing assets at higher and higher prices.”

Many large investors aren’t gambling that big—and their returns are lagging well behind internal targets. The nation’s largest public pension fund, the California Public Employees’ Retirement System, has one-fifth of its assets in bonds and is down 1.3% since July 1, according to public documents. The system, known by its abbreviation Calpers, also has 53.1% of its assets in stocks, 9% in real estate and 9.4% in private equity. In 2015, Calpers posted a return of 2.4%, below its target rate of 7.5%.

The risk dilemma for investors has real-life consequences. Retirement plans, including Calpers and the New York State Common Retirement Fund, are lowering what they predict they can earn on their investments, a move that means workers and cities likely face higher contributions and taxes. For insurers, lower bond returns mean life-insurance policyholders pay more for coverage.

It wasn’t always this complex. Two decades ago big investors had their money sitting primarily in U.S. stocks and bonds. Inflation was 4% and yields on investment-grade bonds roared upward at double that rate.

After the 2008 financial crisis, central bankers pushed down rates to stimulate growth, dropping real returns close to zero for higher-quality debt. Government bonds in Japan and Europe now have nominal yields below zero.

Cheaper borrowing costs generally spur new investments from companies or consumers. But instead, global production is flat or declining, and consumers face stagnant wages that crimp their ability to spend.

That has pushed down the “neutral rate,” or the real rate of interest that neither accelerates nor decelerates the economy. It is now basically flat, compared with 4% or 5% in prior decades, said Roberto Perli, a partner at Cornerstone Macro, a macroeconomic research firm.

While some investors are loading up on traditionally risky assets as a way of hitting ambitious targets, others—concerned about a slowing global economy—are wrestling with how to reduce risk without piling into bonds.

‘I can’t just reach out and grab a high-quality bond that’s yielding 6% or 7%. They don’t exist.’

—Tom Girard, New York Life Insurance Co.

The nation’s second-largest public pension plan, the California State Teachers’ Retirement System, has shifted a significant amount of money away from some stocks and bonds to protect against a downturn. It moved assets into U.S. Treasuries and so-called liquid-alternative funds, which mimic hedge-fund strategies. Calstrs, as the pension is called, reported gains of 1.5% during a choppy 2015, with returns on its fixed-income investments up just 0.6%.

“We used to say bonds would be that risk protection,” said Christopher Ailman, chief investment officer at Calstrs. “Now we can’t.”

For instance, in 2002, safer corporate bonds returned about 11%, while U.S. stocks fell roughly 22%, according to a Segal Rogerscasey analysis of the Russell 3000 stock index, plus historical bond returns tracked by Barclays and Citigroup. But during the 2008 crisis, stocks fell more than 37% and higher-quality bonds declined 3.3%, according to the Segal Rogerscasey analysis. More recently, those types of bonds fell during stock-market tumbles in August and December, Segal Rogerscasey said.

Others are willing to accept lower returns for now and wait for better days ahead. The Wisconsin pension sold off trophy real-estate and private-equity holdings when it believed prices were high over the past two years and switched into publicly traded stocks and bonds that can be sold quickly, Mr. Villa said.

Not all investors have the luxury of avoiding bonds. New York Life Insurance Co., which has about 89% of its \$220 billion in assets in bonds and other fixed-income securities, once could find what it needed among well-known, plain-vanilla securities. Insurers typically have large holdings of high-quality government and corporate bonds, because of state-regulatory guidelines encouraging safe investments.

But now the insurer has to scour the globe for suitable bets in assets in which it had never before dabbled—such as complex bond deals involving railcar leases, shipping containers and legal-settlement payouts.

The insurer has “looked under rocks, far and wide” to find suitable fixed-income investments, said Tom Girard, who leads New York Life’s fixed-income team.

“I can’t just reach out and grab a high-quality bond that’s yielding 6% or 7%,” he added. “They don’t exist.”

## Return and Risk Assumptions, Benchmark and Outlook

*A starting point.*

<b>MPSERS Plan</b>	<b>Assumed Return* (Arithmetic)</b>	<b>Standard Deviation*</b>	<b>Trailing 10-Year (Benchmark**)</b>	<b>Tactical (Short Term) Expectations***</b>
Private Equity	10.7%	24.0%	11.2%	Hold
International Equity	9.3%	20.9%	1.0%	Hold
Domestic Equity	7.6%	17.4%	7.4%	Trim
Real Estate (Core)	6.1%	11.5%	5.9%	Trim
Absolute Return	5.2%	9.0%	4.8%	Hold
Real Ret/Opportunistic	8.3%	12.1%	7.4%	Add
Long-Term Fixed	2.2%	3.5%	4.8%	Hold
Short-Term	1.7%	1.0%	0.8%	Hold

\* Aon Hewitt Investment Consultants 2016 Long-Term Return/Risk Assumptions

\*\* Investment Policy Statement; Annualized Returns

\*\*\* Actual investments may differ due to changing conditions and the availability of new information

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